CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.13/RS/CSR-3/797d/CEMENT/2014-15 Date: 26.03.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
*AGENCY	:	**Mr. R. Shivaram,** No.4/13, Avalamma Choultry Layout, Magadi Road, Bangalore – 560023.
*NAME OF THE WORK	:	Improvements to drains and footpath 4th cross and adjoining roads of Kalyananagara E/s, in Ward No.13, in Shettyhalli Sub Division, BBMP, Bangalore.
*REFERENCE	:	BBMP/AEE/SSD/DZ/PR/2014-15 Dated: 24.03.2015
SAMPLE ID	:	Cement - Sample 2
SAMPLE RECEIVED ON	:	24.03.2015
PERIOD OF TESTING	:	24.03.2015 to 26.03.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	485 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-3/797d/SAND-Gradation/2014-15 : 26.03.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

*** Agency** : **Mr. R. Shivaram,** No.4/13, Avalamma Choultry Layout, Magadi Road, Bangalore – 560023.

*** Name of Work** : Improvements to drains and footpath 4th cross and adjoining roads of Kalyananagara E/s, in Ward No.13, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2014-15 Dated: 24.03.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates - Sample 2

Sample Received on : 24.03.2015

Date of Testing : 26.03.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.80	90-100	90-100	90-100	95-100
2.36	73.30	60-95	75-100	85-100	95-100
1.18	48.10	30-70	55-90	75-100	90-100
600 Micron	23.10	15-34	35-59	60-79	80-100
300 Micron	11.10	5-20	8-30	12-40	15-50
150 Micron	3.10	0-10	0-10	0-10	0-15

Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-3/797d/AGG/GR/2014-15 : 26.03.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

*** Agency** : **Mr. R. Shivaram,** No.4/13, Avalamma Choultry Layout, Magadi Road, Bangalore – 560023.

*** Name of Work** : Improvements to drains and footpath 4th cross and adjoining roads of Kalyananagara E/s, in Ward No.13, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2014-15 Dated: 24.03.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm) - Sample 2

Sample Received on : 24.03.2015

Date of Testing : 26.03.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.50	95-100	85-100
20	36.50	30-70	0-20
10	11.50	10-35	0-5
4.75	1.50	0-5	-

Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-3/797d/CC Solid Block/2014-15 : 28.03.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
* Agency	: **Mr. R. Shivaram,** No.4/13, Avalamma Choultry Layout, Magadi Road, Bangalore – 560023.
* Name of the Work	: Improvements to drains and footpath 4th cross and adjoining roads of Kalyananagara E/s, in Ward No.13, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/2014-15 Dated: 24.03.2015
Sample Received on	: 24.03.2015
Date of Testing	: 28.03.2015
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	34.52	259.3	3.24	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.26	260.1	3.25	
3	Block 3	34.90	261.2	3.27	
4	Block 4	35.20	260.5	3.26	
5	Block 5	36.25	260.8	3.26	
6	Block 6	34.23	259.3	3.24	
7	Block 7	36.30	258.4	3.23	
8	Block 8	36.20	262.5	3.28	

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-3/797d/CC Solid Block/2014-15 : 28.03.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
* Agency	: **Mr. R. Shivaram,** No.4/13, Avalamma Choultry Layout, Magadi Road, Bangalore – 560023.
* Name of the Work	: Improvements to drains and footpath 4th cross and adjoining roads of Kalyananagara E/s, in Ward No.13, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/2014-15 Dated: 24.03.2015
Sample Received on	: 24.03.2015
Date of Testing	: 28.03.2015
Size of Blocks	: 400mm x 150mm x 200mm
Cross Sectional Area	: 60000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	24.36	196.2	3.27	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	25.10	197.2	3.29	
3	Block 3	25.32	198.1	3.30	
4	Block 4	24.95	196.5	3.28	
5	Block 5	25.36	197.2	3.29	
6	Block 6	24.90	193.6	3.23	
7	Block 7	26.31	194.8	3.25	
8	Block 8	25.95	195.6	3.26	

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-3/797d/Pre.Cast Slab/2014-15

08.05.2015

TEST REPORT CONCRETE CORE (PRE CAST SLAB)

*** Name of Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

*** Name of Agency** : **Mr. R. Shivaram,** No.4/13, Avalamma Choultry Layout, Magadi Road, Bangalore – 560023.

*** Name of work** : Improvements to drains and footpath 4th cross and adjoining roads of Kalyananagara E/s, in Ward No.13, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2014-15 Dated: 24.03.2015

Techinical Reference : IS:516-1959 (Reaffirmed 2008), SP-24:1983.

Sample ID : Pre cast slab

Sample Received on : 02.05.2015

Date of Testing : 08.05.2015

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	80.00	0.394	2508.28	1.60	0.960	32.10	16.35	17.66	16.95	21.19
2	50.00	81.00	0.402	2527.62	1.62	0.965	32.60	16.60	17.93	17.30	21.63
3	50.00	82.00	0.409	2540.27	1.64	0.970	33.15	16.88	18.23	17.69	22.11

* Information is furnished by the Customer/Representative

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Job No.: CTCE/BBMP/W.No.12/RS/CSR-3/797d/CUBE/2014-15 14.05.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

*** Agency** : **Mr. R. Shivaram,** No.4/13, Avalamma Choultry Layout, Magadi Road, Bangalore – 560023.

*** Name of the work** : Improvements to drains and footpath 4th cross and adjoining roads of Kalyananagara E/s, in Ward No.13, in Shettyhalli Sub Division, BBMP, Bangalore.

*** Reference** : BBMP/AEE/SSD/DZ/PR/2014-15 Dated: 24.03.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as on : 28th day

Sample Received on : 16.04.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.04.2015	14.05.2015	8.498	378.9	16.84
2	16.04.2015	14.05.2015	8.336	360.8	16.04
3	16.04.2015	14.05.2015	8.205	345.5	15.36

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